63-Simmons et al G-8 (1941-1951) 1954
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844 parts of the country. The graduate pharmacists totaled 214.

DISEASES

659 Widespread discrepancies in reporting de-
165 tract from the validity of the morbidity and the mortality statistics. Among the two thirds or more of the population living in the rural villages, not only is the reporting of cases of illness and death poor, but the accuracy of diagnosis is often questionable. In a total of 15,457 deaths officially recorded in 1949, almost 35 per cent were listed as due to "ill-defined, unknown or unspecified" causes. Facilities for laboratory confirmation are lacking outside the larger population centers, and confusion is frequently evident in the differentiation of related infections. Reporting is negligible in the more remote areas, and particularly
659 among the Bedouin tribes. Except in the
165 course of special surveys, or when abnor-
758 mal epidemic conditions necessitate the enforcement of preventive measures, medical treatment is seldom accessible to the in-
659 habitants of such regions. Even in cities,
165 where the degree of reporting is considerably higher than in the rural areas, the morbidity statistics reflect a general tendency to evade the reporting of certain infectious diseases for fear of isolation. The records of cases treated in the government hospitals, which cannot be regarded as representative, and the reports of particular investigations or surveys provide the most reliable data for the evaluation of the prevalence and the distribution of specific diseases.

Diseases Spread or Contracted Chiefly Through Intestinal or Urinary Tract

164 **Typhoid and Paratyphoid Fevers.** Enteric fevers are endemic, and, in the opinion of the local authorities, a high degree of immunity resulting from repeated exposure to infection exists among the inhabitants.
164 Cases of typhoid fever occur throughout the
364 year, with the peak of incidence usually between June and December, when the con-

63.Simmons et al G-8 (1942-1981) 1984
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761 Comparative rates in urban and rural com-
369 munities were determined in a series of tests
164 on unorganized groups in the city and two adjacent farming districts. In Damascus, positive reactions to tuberculin were given by 47.7 of the boys and 40.8 per cent of the girls tested at 15 years of age. At 20 to 25 years of age, positive reactions were obtained in 86.7 per cent and 77.4 per cent, respectively; at 40 to 45 years of age, in 95.6 and 86.6 per cent, respectively. In the rural communities the positive reaction rates were consistently lower, but approached the urban levels in the older age groups. Among individuals at 15 years of age, 51.6 per cent of the boys and 27.2 per cent of the girls reacted to tuberculin in one area, and 18.1 per cent of the boys and 21.2 per cent of the girls, in another. At 40 to 45 years of age, the proportion of positive reactors averaged 80 per cent in the first series and 50 to 100 per cent in the second.[48]

744 Within recent years the Ministry of
751 Health has embarked upon a tuberculosis
747 control program. In January, 1950, a tuberculin testing and BCG inoculation campaign was organized under the auspices of the United Nations International Children's Emergency Fund and associated organizations, which was taken over by the Ministry
659 in September. Surveys have been carried
361 out in most of the provincial capitals and
751 surrounding rural districts, and the Ministry contemplates the gradual extension of the campaign to cover the populations in all parts of the country. In the course of the investigations completed in 7 provinces between January and September, 1950, almost 417,000 persons were tuberculin tested, and over 188,000 were inoculated with BCG vaccine. The majority were schoolchildren, although miscellaneous population groups of all ages were also included. The proportion of positive reactors in the different provinces ranged from 23 per cent in Jebel ed Druz (As Suwaydah) to 42 per cent in Aleppo.

758 The diagnostic and the treatment facili-
743

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758 743 ties are inadequate, especially in the rural areas. Up to 1949 there were only 2 small tuberculosis hospitals in the entire country 653 743 —near Damascus and near Aleppo. The development of increased medical facilities has recently been undertaken by the Ministry, and, in 1951, additions to the hospital near Damascus, to provide a total of 350 beds, and a new 300-bed hospital at Aleppo were under construction. Plans were also projected for the erection of a 500-bed hospital in Latakia province, which would bring the total number of beds available for the isolation and the treatment of tuberculous patients to between 1,000 and 1,200.

758 814 A tuberculosis demonstration and training center was established in Damascus in 1952 under the direction of the World Health Organization in collaboration with the Ministry and the Syrian University. It pro[illegible] a regional headquarters for the training of doctors, nurses and social workers in the public health, the therapeutic and the social aspects of the disease.

164 751 361 Smallpox. Vaccination against smallpox is compulsory, but enforcement is necessarily incomplete in the more remote areas and among the nomadic tribes. Outbreaks occur from time to time, with sporadic cases reported almost annually in the intervening 164 years. The disease was epidemic in Syria and Lebanon in 1933-34, but from 1935 to 1941 only occasional cases were observed. In 1941, smallpox spread to Syria from Iraq, where an epidemic focus had developed in 1940. Over 1,980 cases were recorded in 1942 and 1,132 in 1943. The outbreaks subsided in 1944, and again no more than sporadic cases were noted until 1948, when 894 cases were reported. The known incidence declined to 643 cases in 1949 and subsequently to 15 cases in 1950-51.

Other Infections. Pneumonia and influenza are prevalent. Epidemics of measles are frequent, with the peak of prevalence 165 normally between January and May. The 164 majority of cases are not seen by the medi- 361 cal officers, but, from the fragmentary data available, the fatality rates appear to aver-

63:Simmons et al G-5 (1941-1951) 1954
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sion hospital clinic in Deir ez Zor,[14, 18] the prevalence among the Bedouin has been estimated at 50 to 90 per cent and among the seminomadic Arab townsmen at 20 to 35 per cent. 164 361

The facilities for the diagnosis and the treatment of venereal diseases are meager. As of 1951, the Ministry of Health operated special venereal disease hospitals and outpatient clinics in Damascus and Aleppo. It also maintained 2 mobile dispensaries for the treatment of syphilis and bejel in the eastern provinces. A campaign for the mass treatment of bejel and syphilis was initiated in 1952 by the Ministry, in co-operation with the World Health Organization and the United Nations International Children's Emergency Fund. The findings of the various field units should eventually provide a comprehensive picture of the distribution and the prevalence of these diseases in eastern Syria. 738 743

Diseases of the Eyes. Trachoma is a major public health problem in all parts of the country, although it varies in prominence under urban and rural conditions. The infection rates usually average less than 10 per cent in the cities, but approximate 40 to 60 per cent in the rural areas, where over two thirds of the people live. Repeated surveys among school groups in northern Syria[21] indicate that slightly more than 5 per cent of the children in Aleppo are affected, in contrast with 30 to 40 per cent in the environs of the city and 60 per cent in the rural villages. The disease exists at all levels of society, but is less frequent among the nomadic tribes than among the settled communities in the same general region. Differences in prevalence, influenced by local customs, are also noted among the various racial and religious groups. In a survey covering mountainous and coastal areas of Latakia *muhafasat*, reported in 1933,[22] the highest infection rates were found in the predominantly Alawite districts. The index of infection averaged 44 per cent. It ranged from 25 per cent among the Armenians to 61 per cent among the 164 369 164 563

p. 153(b)

164 Alawites and 68 per cent among the Ismail-
563 ites. Trachoma is one of the principal causes of blindness, in spite of the fact that, in the opinion of many local observers, a large percentage of uncomplicated cases exhibit a tendency to spontaneous cure.

164 Gonococcal and other types of infectious conjunctivitis are common. In a series of 315 conjunctival examinations, reported in 1931,[18] from the mission hospital at Deir ez Zor, *Hemophilus lacunatus* (Morax-Axenfeld bacillus) was identified in 34 per cent, *H. conjunctivitidis* (Koch-Weeks bacillus) in about 10 per cent and *Neisseria gonorrhoeae* in 5 per cent, while different pyogenic cocci were found in the remainder.

164 Diseases of the Skin. As is to be ex-
515 pected, in view of the widespread ignorance
758 of the principles of personal hygiene and the scarcity of water in many areas, skin diseases are prevalent. They represented almost 10 per cent of the total cases treated in government hospitals and clinics in 1949.

164 Mycotic infections are numerous, with ring-
361 worm of the scalp predominating in most
511 localities. Impetigo and scabies are widespread, particularly among children in the rural villages. Pediculosis is almost universal among the inhabitants of the poorer, congested communities, both urban and rural. Occasional cases of human myiasis are encountered. A form of dermatitis, caused by the bite of *Phlebotomus papatasii* and other sandflies, is sometimes encountered among susceptible individuals in the summer months.

164 Leprosy. Endemic foci of leprosy exist in various parts of the country, but primarily in Hauran and Latakia provinces. The extent of infection is not accurately known, and estimates of prevalence range from 90 to 250 cases. A few new cases are
[743] reported each year. Theoretically, isolation is compulsory, and the Ministry of Health maintains a leprosarium at Douma, near Damascus, which has facilities for the care of about 75 lepers.

752 Rabies. Sporadic cases of rabies are re-
164 ported. The majority result from the bites

of rabid dogs, but wolves, hyenas, jackals, rats and other animals are sometimes implicated. Prophylactic treatment is provided by the Ministry, and a special division for the preparation of antirabic vaccines is incorporated in the central laboratory in Damascus. From 140 to 250 persons were treated annually in the 4 years 1948-51.

Other Infections. Tetanus is endemic, and occasional cases are observed. Anthrax is enzootic among the sheep, and human infections sometimes occur in the agricultural areas. Sporadic cases of Weil's disease are reported.

Diseases Spread by Arthropods

Malaria. Malaria is a disease of major public health and economic importance, since it is endemic or hyperendemic in all populous sections of the country. The prevalence of the disease is directly related not only to the physical geography of the different regions, but to the degree and the type of cultivation. The most seriously affected foci are the plains around Damascus and Aleppo, the Orontes valley from Hama to the Turkish frontier, the irrigated zones bordering the Belikh and the Khabour rivers and their tributaries, and the swampy districts of Hauran province. Universally high infection rates are experienced during epidemic years, even in areas of low endemicity.

No large-scale surveys have been attempted, but accumulated studies provide rough estimates of the extent of infection in localized areas. Prior to the development of a program for the control of malaria by the Ministry of Health and the Near East Foundation in 1949-50, the spleen index among children under 10 years of age in the villages around Damascus ranged from 40 to 80 per cent, with the highest rates in villages on the periphery of the Outaybeh swamps in the eastern part of the oasis. In the vicinity of Homs, the spleen rates normally average 50 to 70 per cent.

In the course of joint surveys made by the malariologists of the United Nations